

### Remarks

This is a reply to the Official Action dated July 24, 2008 and the restriction requirement and resultant non-compliant amendment dated March 13, 2009 regarding the above-identified patent application.

The restriction requirement and withdrawal of the method claims is traversed. The remaining method claim 14 is admitted as being obvious to one skilled in the art over pending means claim 27 and vice versa. In view of this admission, the restriction requirement must be withdrawn. See MPEP 803 II < GUIDELINES. “If there is an express admission that the claimed inventions \*> would have been < obvious **over each other** within the meaning of 35 U.S.C. 103, restriction should not be required.” (bold emphasis added.)

This is not an admission that if one of claims 14 or 27 is found to be unpatentable over prior art that the remaining claim is unpatentable over the same prior art.

The Examiner has objected to the drawings on the grounds of existing textual material and hand written figures.

While neither of these are valid reasons for drawing objections (See MPEP 608.02(b)I), substitute drawing sheets are provided that incorporate type style numbers and eliminate textual material as shown in the enclosed annotated sheets. In the annotated sheets, textual material is shown as crossed out and added numbers are circled. No new matter is added.

Clean and marked up copies of a substitute specification are provided to include appropriate sections. No new matter is added.

Original claim 1 has been rejected under 35 U.S.C. 112 on the ground that the instant claims are enabled only for polymeric methacrylamide. The claims have been limited to inclusion of polymeric methacrylamide.

The Examiner has further rejected claim 1 on the ground that it is not clear what “breaking open the enclosing water” means. There is no doubt that it means that water enclosing the soil particle is broken open. There is no possible ambiguity. The Examiner is referred to page 2, line 9 of the specification that says: “Introduction of the additive according to the invention into the soil mixture, by virtue of the water casing which generally surrounds the

individual grain being broken open, obviously results in better coagulation by virtue of the stronger adhesion forces with which the individual particles of the soil can adhere to each other after their water casing has been broken open....”

The Examiner has also objected to the phrase “soil, preferably argillaceous material and/or course clay” as being indefinite as to whether it is soil or argillaceous material. Again there is no ambiguity. “Soil” is generic to both “argillaceous material” and “clay”. The Examiner is referred to the definition of soil in “McGraw Hill’s Dictionary of Scientific and Technical Terms”, 2<sup>nd</sup> Edition, 1978, pages 101 and 1489. “Argillaceous” – “Of rocks or sediments made of or largely composed of clay-size particles or clay minerals.” and “Soil”- “unconsolidated rock material over bedrock”

There is no ambiguity and the rejection should be withdrawn.

The Examiner has also objected to claim 1 on the ground that a “preferred” alternative is included in the claim. The claims have been amended to overcome the objection.

The Examiner has also objected to claim 1 on the ground that there is insufficient antecedent basis for “the enclosing water” and “the grain” in the claim. These objections have been overcome by amendment.

The “means” terminology objected to by the Examiner has been overcome by amendment. MPEP 2181 requires a three prong test. In particular, (C) requires that “means for” must not be modified for achieving a specific function. In the present case, broadest “means” claim 27 has more than enough modifying “sufficient material” to overcome any presumption concerning ambiguity or breadth of the claim. The rejection should therefore be withdrawn..

In view of the foregoing amendments and remarks, all rejections under 35 U.S.C. 112 should now be withdrawn.

Claim 1 has been rejected under 35 U.S.C. 103 as being unpatentable over either U.S. Patent 6,340,385 to Wammes or U.S. Patent 4,964,918 to Brown et al.

Neither of these references teach or suggest the presently claimed means or construction.

Wammes teaches away from the present invention in that it teaches forming a gel. Gels as described by Wammes have a water matrix which is exactly contrary to the highly

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Official Action Dated March 13, 2009  
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consolidated material used in the present invention where water surrounding soil particles is broken apart. This is similarly true of Brown et al.

All rejections should be withdrawn.

In view of the foregoing amendments and remarks, it is submitted that all claims are now in condition for allowance, which action is courteously requested.

Respectfully submitted,



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## Arenicolidae

Arl

**arenicola** [INV ZOO] The lugworms, a family of mud-dwelling worms belonging to the Sedentaria.

**arenicollis** [GEO] A hole, groove, or other mark in a sedimentary rock, generally sandstone, interpreted as a burrow made by an arenicolous marine worm or a trail of a mollusk.

**arenicolous** [ZOO] Living or burrowing in sand.

**arena** [GEO] A European stage including Lower Ordovician time (above Tremadocian, below Llanvirnian), also known as Skiddavian.

**arenite** [PETR] Consolidated sand-texture sedimentary rock with clay cementation. Also known as arenite; psammite.

**arene** See arenite.

**areo** [ASTRON] With Mars as a center.

**areography** [ASTRON] Determination, by observation and measurement of the exact positions of points on, and the figures of areas of large portions of, the surface of the planet Mars, or the shape and size of the planet Mars.

**areographic** [ASTRON] Referring to positions on Mars measured in latitude from the planet's equator and in longitude from a reference meridian.

**areography** [ASTRON] The study of the surface features of Mars.

**areole** [BIO] Descriptive biogeography. [ECOL]

**areola** [ANAT] 1. The portion of the iris bordering the pupil.

2. A pigmented ring surrounding a nipple, vesicle, or vesicles.

3. A small space, interval, or pore in a tissue.

**areola mammae** [ANAT] The circular pigmented area surrounding the nipple of the breast. Also known as areola mammae; mammary areola.

**areola papillaris** See areola mammae.

**areology** [ASTRON] The scientific study related to the properties of Mars.

**areo** [ASTRON] The planet Mars.

**areo** [GEO] Narrow, jagged ridge produced by the merging of ridges. Also known as arris; crib; serrate ridge.

**areoid** [ASTRON] An asteroid with a diameter of about 210 kilometers, mean distance from the sun of 3.069 astronomical units, and C-type surface composition.

**areo** [METEOROL] A code word used internationally to indicate an area forecast; usually applied to an aviation weather forecast.

**areo** [METEOROL] A code word used internationally to indicate an area forecast with units in the English system; usually applied to an aviation weather forecast.

**areomylonite** [MINERAL] A black monoclinic amphibole, containing sodium and silicon trioxide with occluded water and some calcium. Also known as soda hornblende.

**areo diagram** [MATH] A two-dimensional cartesian coordinate system for representing the complex numbers, the numbers  $x + iy$  being represented by the point whose coordinates are  $x$  and  $y$ .

**areo lamp** [ENG] A gas lamp having a tube-shaped wick, allowing current of air inside as well as outside the flame.

**areo** [INV ZOO] The soft ticks, a family of arachnids in the order Ixodidae; several species are important as parasites and disease vectors for man and domestic animals.

**areo method** [ASTRON] A technique to estimate the brightness of variable stars; it involves estimating the difference in magnitude between the variable stars as compared to more stars that are invariable.

**areo cell** [HISTOL] Any of the cells of the gastrointestinal mucosa that are thought to secrete serotonin.

**areo** [CHEM] Relating to or containing silver.

**areo** [CHEM] See silver suboxide.

**areo** [VERT ZOO] A family of marine deepwater coniform fishes, including deep-sea smelts, in the order

**areo** [MINERAL]  $\text{Ag}_2\text{S}$  A lustrous, lead-gray ore of silver. A monoclinic mineral and is dimorphous with pyrite. Also known as argyrite; silver glance; vitreous

**areo** [INORG CHEM] Complexes formed, for example, in the cyanidation of silver ores and in electroplating.

when silver cyanide reacts with solutions of soluble metal cyanides. Also known as dicyanoargentates.

**argentojarosite** [MINERAL]  $\text{AgFe}_3(\text{SO}_4)_2(\text{OH})_6$  A yellow or brownish mineral consisting of basic silver ferric sulfate.

**argentometer** [ENG] A hydrometer used to find the amount of silver salt in a solution.

**argentometry** [ANALY CHEM] A volumetric analysis that employs precipitation of insoluble silver salts; the salts may be chromates or chlorides.

**argentophil** [BIO] Of cells, tissues, or other structures, having an affinity for silver.

**argentum** [CHEM] Latin for silver.

**Argidae** [INV ZOO] A small family of hymenopteran insects in the superfamily Tenthredinoidea.

**argillaceous** [GEO] Of rocks or sediments made of or largely composed of clay-size particles or clay minerals.

**argillation** [GEO] Development of clay minerals by weathering of aluminum silicates.

**argillite alteration** [GEO] A rock alteration in which certain minerals are converted to minerals of the clay group.

**argilliferous** [GEO] Abounding in or producing clay.

**argillite** [PETR] A compact rock formed from siltstone, shale, or claystone but intermediate in degree of induration and structure between them and slate; argillite is more indurated than mudstone but lacks the fissility of shale.

**arginase** [BIOCHEM] An enzyme that catalyzes the splitting of urea from the amino acid arginine.

**arginine** [BIOCHEM]  $\text{C}_6\text{H}_{14}\text{N}_4\text{O}_2$  A colorless, crystalline, water-soluble, essential amino acid of the  $\alpha$ -ketoglutaric acid family.

**Argo** [ASTRON] The large Ptolemy constellation; a southern constellation, now divided into four groups (Carina, Pupis, Vela, and Pyxis Nautica). Abbreviated Arg. Also known as Ship.

**argol** [FOOD ENG] A deposit formed in casks during aging of wine. [MATER] Any of several manures used as fuel in parts of Asia.

**argon** [CHEM] A chemical element, symbol Ar, atomic number 18, atomic weight 39.998.

**argon ionization detector** [NUCLEO] An ionization chamber that is filled with argon gas.

**argon laser** [OPTICS] A gas laser using ionized argon; emits a 4880-angstrom line as well as infrared radiation.

**Argolian** [GEO] Upper Jurassic (lower Lusitanian), a substage of geological time in Great Britain.

**Argulidae** [INV ZOO] A group of crustaceans known as the fish lice; taxonomic status is uncertain.

**argument** [ASTRON] An angle or arc, as in argument of perigee. [MATH] See amplitude; independent variable.

**argument of latitude** [ASTRON] The angular distance measured in the orbital plane from the ascending node to the orbiting object; the sum of the argument of perigee and the true anomaly.

**argument of perigee** [ASTRON] The angle or arc, as seen from a focus of an elliptical orbit, from the ascending node to the closest approach of the orbiting body to the focus; the angle is measured in the orbital plane in the direction of motion of the orbiting body.

**Argue** [ASTRON] A star of visual magnitude 1.74; spectral type K0.

**argyria** [MED] A dusky-gray or bluish discoloration of the skin and mucous membranes produced by the prolonged administration or application of silver preparations.

**argyrodite** [MINERAL]  $\text{Ag}_3\text{GeS}_3$  A steel-gray mineral, one of two germanium minerals and a source for germanium; crystallizes in the isometric system and is isomorphous with canfieldite.

**argyrophil lattice fiber** See reticular fiber.

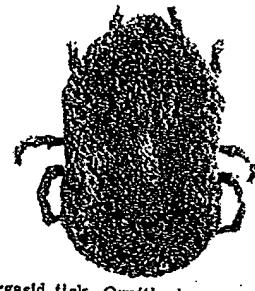
**Arhynchobdellae** [INV ZOO] An order of annelids in the class Hirudinea characterized by the lack of an eversible proboscis; includes most of the important leech parasites of man and warm-blooded animals.

**Arhynchodina** [INV ZOO] A suborder of ciliophoran protozoans in the order Thigmotrichida.

**arhythmicity** [BIO] A condition characterized by the absence of an expected behavioral or physiologic rhythm.

**Ari** See Aries.

## ARGASIDAE



Argasid tick, *Ornithodoros corticeus*, enlarged to about 4 times natural size.

## ARGENTITE



Argentite with quartz crystals from Sardinia, Sardinia. (Specimen from Department of Geology, Bryn Mawr College)

## ARGON

18	Ar
H	
D	
Mg	
Al	
Si	
P	
S	
Cl	
K	
Ca	
Sc	
Ti	
V	
Cr	
Mn	
Fe	
Co	
Ni	
Cu	
Zn	
Ga	
In	
Tl	
Pb	
Bi	
Po	
Ra	

Periodic table of the chemical elements showing the position of argon.

soft phosphate  
Sol

489

and covered by a metal plate bolted or riveted to the vessel.  
**soil phosphate** [MATER] Powdery, impure tricalcium phosphate separated in fertilizer manufacture from rock and pebble phosphates.

**soft point** [ORD] A bullet with a soft point, intended to spread upon striking a target with some resistance, such as the flesh of game; not permitted in combat operations.

**soil radiation** [PHYS] Radiation whose particles or photons have a low energy, and, as a result, do not penetrate any type of material readily.

**soil rime** [HYD] A white, opaque coating of fine rime deposited chiefly on vertical surfaces, especially on points and edges of objects, generally in supercooled fog.

**soft rock** [MIN ENGL] Rock that can be removed by air-operated hammers, but cannot be handled economically by a pick. [PETR] 1. A broad designation for sedimentary rock. 2. A rock that is relatively nonresistant to erosion.

**soft rot** [PL PATH] A mushy, watery, or slimy disintegration of plant parts caused by either fungi or bacteria.

**soft-shell disease** [INV ZOO] A disease of lobsters caused by a chitinous bacterium which extracts chitin from the exoskeleton.

**soil shower** [NUC PHYS] A cosmic-ray shower that cannot penetrate 15 to 20 centimeters of lead; consists mainly of electrons and positrons.

**soft solder** [MET] Solder composed of an alloy of lead and tin. Also known as low melting solder.

**soil soldering** [MET] Soldering with a soft solder.

**soil tube** [ELECTR] 1. An x-ray tube having a vacuum of about 0.000002 atmosphere (0.02650 newton per square meter), the remaining gas being left in intentionally to give less-penetrating rays than those of a more completely evacuated tube. 2. See gassy tube.

**software** [ADP] The totality of programs usable on a particular kind of computer, together with the documentation associated with a computer or program, such as manuals, diagrams, and operating instructions.

**software monitor** [ADP] A system, used to evaluate the performance of computer software, that is similar to accounting packages, but can collect more data concerning usage of various components of a computer system and is usually part of the control program.

**soil waste** [TEXT] The waste from yarn manufacturing prior to spinning, including some spinning waste; usually reprocessed in the mill.

**soft water** [CHEM] Water that is free of magnesium or calcium salts.

**soft wood** [MATER] Wood from a coniferous tree.

**soft x-ray** [ELECTROMAG] An x-ray having a comparatively long wavelength and poor penetrating power.

**soft x-ray absorption spectroscopy** [SPECT] A spectroscopic technique which is used to get information about unoccupied states above the Fermi level in a metal or about empty conduction bands in an insulator.

**soft x-ray appearance potential spectroscopy** [SPECT] A branch of electron spectroscopy in which a solid surface is bombarded with monochromatic electrons, and small but abrupt changes in the resulting total x-ray emission intensity are detected as the energy of the electrons is varied. Abbreviated SXAPS.

**sogasold** [PHYS] A system of solid particles dispersed in a gas.

**Sohniße Abyssal Plain** [GEOL] A basin in the North Atlantic, about 2400 fathoms deep, between Newfoundland and the Mid-Atlantic Ridge.

**Sohncke's law** [PHYS] The law that the stress per unit area normal to a crystallographic plane needed to produce a fracture in a crystal is a constant characteristic of a crystalline substance.

**soil** [GEOL] 1. Unconsolidated rock material over bedrock. 2. Freely divided rock-derived material containing an admixture of organic matter and capable of supporting vegetation.

**soil air** [GEOL] The air and other gases in spaces in the soil; specifically, that which is found within the zone of aeration. Also known as soil atmosphere.

**soil atmosphere** See soil air.

**soil blister** See frost mound.

**soil-cement** [MATER] A compacted mixture of soil, cement, and water used as a base course or surface for roads and airport paving.

**soil chemistry** [GEOCHEM] The study and analysis of the inorganic and organic components and the life cycles within soils.

**soil colloid** [GEOL] Colloidal complex of soils composed principally of clay and humus.

**soil complex** [GEOL] A mapping unit used in detailed soil surveys; consists of two or more recognized classifications.

**soil conservation** [ECO] Management of soil to prevent or reduce soil erosion and depletion by wind and water.

**soil creep** [GEOL] The slow, steady downhill movement of soil and loose rock on a slope. Also known as surficial creep.

**soil erosion** [GEOL] The detachment and movement of topsoil by the action of wind and flowing water.

**soil flow** See solifluction.

**soil fluction** See solifluction.

**soil formation** See soil genesis.

**soil genesis** [GEOL] The mode by which soil originates, with particular reference to processes of soil-forming factors responsible for the development of true soil from unconsolidated parent material. Also known as pedogenesis; soil formation.

**soil mechanics** [ENGL] The application of the laws of solid and fluid mechanics to soils and similar granular materials as a basis for design, construction, and maintenance of stable foundations and earth structures.

**soil microbiology** [MICROBIO] A study of the microorganisms in soil, their functions, and the effect of their activities on the character of the soil and the growth and health of plant life.

**soil moisture** See soil water.

**soil physics** [GEOPHYS] The study of the physical characteristics of soils; concerned also with the methods and instruments used to determine these characteristics.

**soil pipe** [CIV ENGL] A vertical cast-iron or plastic pipe for carrying sewage from a building into the soil drain.

**soil profile** [GEOL] A vertical section of a soil, showing horizons and parent material.

**soil rot** [PL PATH] Plant rot caused by soil microorganisms.

**soil science** [GEOL] The study of the formation, properties, and classification of soil; includes mapping. Also known as pedology.

**soil series** [GEOL] A family of soils having similar profiles, and developing from similar original materials under the influence of similar climate and vegetation.

**soil shear strength** [GEOL] The maximum resistance of a soil to shearing stresses.

**soil stabilizer** [MATER] A chemical that alters the engineering property of a natural soil; used to stabilize soil slopes; to prepare for building foundations, and to prevent erosion.

**soil stack** [BUILD] The main vertical pipe into which flows the waste water from all fixtures in a structure.

**soil stripes** [GEOL] Alternating bands of fine and coarse material in a soil structure.

**soil structure** [GEOL] Arrangement of soil into various aggregates, each differing in the characteristics of its particles.

**soil survey** [GEOL] The systematic examination of soils, their description and classification, mapping of soil types, and the assessment of soils for various agricultural and engineering uses.

**soil thermograph** [ENG] A remote-recording thermograph whose sensing element may be buried at various depths in the earth.

**soil thermometer** [ENG] A thermometer used to measure the temperature of the soil, usually the mercury-in-glass thermometer. Also known as earth thermometer.

**soil water** [HYD] Water in the belt of soil water. Also known as rhizic water; soil moisture.

**soil-water belt** See belt of soil water.

**soil-water zone** See belt of soil water.

**sol** [CHEM] A colloidal solution consisting of a suitable dispersion medium, which may be gas, liquid, or solid, and the colloidal substance, the disperse phase, which is distributed throughout the dispersion medium.

**Sol** See sun.